CLAIMS

1. An image coding method for sequentially coding an input image comprising a plurality of pixels and including an image having an arbitrary shape, said image coding method comprising:

identifying whether an input image is an interlace image or a progressive image, and generating identification information indicating a result of said identifying;

performing motion compensation predictive coding for the input image by using a coded input image as a reference image; and

padding pixel values of insignificant pixels in the coded input image, to be used as a reference image in the motion compensation predictive coding, on the basis of the identification information;

wherein in said padding:

when the input image is an interlace image, pixel values of insignificant pixels in the input image are padded in field units to generate a reference image to be used in the motion compensation predictive coding; and

when the input image is a progressive image, the pixel values of insignificant pixels in the input image are padded in frame units to generate a reference image to be used in the motion compensation predictive coding.

2. An image coding method as claimed in claim 1, wherein in said performing motion compensation predictive coding, when the input image is an interlace image, the motion compensation predictive coding for the input image is performed in block units, each having a predetermined size, using the reference image in which the pixel values of insignificant pixels are padded in field units.

3. An image decoding method for sequentially decoding a coded input image comprising a plurality of pixels and including an image having an arbitrary shape, said image decoding method comprising:

performing motion compensation predictive decoding for the coded input image by using a decoded input image as a reference image; and

padding pixel values of insignificant pixels in the decoded input image, to be used as a reference image in the motion compensation predictive decoding, on the basis of identification information which is generated during coding of the input image and which indicates whether the coded input image is an interlace image or a progressive image;

wherein in said padding:

when the coded input image is an interlace image, pixel values of insignificant pixels in the decoded input image are padded in field units to generate a reference image to be used in the motion compensation predictive decoding; and

when the coded input image is a progressive image, the pixel values of insignificant pixels in the decoded input image are padded in frame units to generate a reference image to be used in the motion compensation predictive decoding.

4. An image decoding method according to claim 3, wherein in said performing motion compensation predictive decoding, when the coded input image is an interlace image, the motion compensation predictive decoding for the coded input image is performed in block units, each having a predetermined size, using the reference image in which the pixel values of insignificant pixels are padded in field units.

5. A computer readable data recording medium containing a program operable to cause a computer to sequentially code an input image comprising a plurality of pixels and including an image having an arbitrary shape, said computer readable data recording medium comprising:

a computer readable program code operable to cause the computer to identify whether an input image is an interlace image or a progressive image, and generate identification information indicating a result of the identification;

a computer readable program code operable to cause the computer to perform motion compensation predictive coding for the input image by using an coded input image as a reference image; and

a computer readable program code operable to cause the computer to pad pixel values of insignificant pixels in the coded input image, to be used as a reference image in the motion compensation predictive coding, on the basis of the identification information;

wherein in the padding:

when the input image is an interlace image, pixel values of insignificant pixels in the input image are padded in field units to generate a reference image to be used in the motion compensation predictive coding; and

when the input image is a progressive image, the pixel values of insignificant pixels in the input image are padded in frame units to generate a reference image to be used in the motion compensation predictive coding.

6. A computer readable data recording medium as claimed in claim 5, wherein in the motion compensation predictive coding, when the input image is an interlace image, the motion compensation predictive coding for the input image is performed in block units, each having a predetermined size, using the reference image in which the pixel values of insignificant pixels are padded in field units.

7. A computer readable data recording medium containing a program operable to cause a computer to sequentially decode a coded input image comprising a plurality of pixels and including

an image having an arbitrary shape, said computer readable data recording medium comprising:

a computer readable program code operable to cause the computer to perform motion compensation predictive decoding for the coded input image by using a decoded input image as a reference image; and

a computer readable program code operable to cause the computer to pad pixel values of insignificant pixels in the decoded input image, to be used as a reference image in the motion compensation predictive decoding, on the basis of identification information which is generated during coding of the input image and which indicates whether the coded input image is an interlace image or a progressive image;

wherein in the padding:

when the coded input image is an interlace image, pixel values of insignificant pixels in the decoded input image are padded in field units to generate a reference image to be used in the motion compensation predictive decoding; and

when the coded input image is a progressive image, the pixel values of insignificant pixels in the decoded input image are padded in frame units to generate a reference image to be used in the motion compensation predictive decoding.

8. A computer readable data recording medium as claimed in claim 7, wherein in the motion compensation predictive decoding, when the coded input image is an interlace image, the motion

compensation predictive decoding for the coded input image is performed in block units, each having a predetermined size, using the reference image in which the pixel values of insignificant pixels are padded in field units.